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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/961,255

09/25/2001

Bernard Dieny

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08/04/2006

EXAMINER

FALASCO, LOUIS V

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1940 DUKE STREET

ALEXANDRIA, VA 22314

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 08/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/961,255

Applicant(s)

DIENY, BERNARD

Examiner

Louis Falasco

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6 and 9-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 9-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

PAPERS RECEIVED

1. The Amendment and Remarks filed 4/19/04 are acknowledged.

CLAIMS

2. The claims are: 1, 3-6 and 9-11.

Claim Rejections - 35 U.S.C. §103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 3-6 and 9-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over **Swagten et al** (Physical Review B vol. 53 Nov 14 pp 9108 - 9114) or **Singleton et al** (US 2002/001207) - either on taken with **Ikarashi et al** (US 6210810) or **Fukuzawa et al** (US 6338899).

Swagten et al and **Singleton et al** are cited for reasons of record (i.e., final rejection mailed 7/11/2003). Applicants' Amendment and Remarks of 4/19/04 contend the instant claims are distinguished from the teachings of **Swagten et al** and

Singleton et al by the amendment of 4/19/05 limiting the claims to the conductive reflective nonmagnetic layer being *directly in* contact with a spin valve magnetic layer (re: last complete paragraph of page 5 Amendment Remarks of 4/19/04 and Examiner's Interview of 09/05/03 noted in the interview summary page 2). However **Ikarashi et al** and **Fukuzawa et al** (newly cited) teach the worker of ordinary skill to modify a spin valve in a record play head by teaching the layer of conductive nonmagnetic layer *directly in* contact with a magnetic layer (**Ikarashi et al**: as illustrated at Fig. 1 layer 33 col. 8 lns 38,39; Fig. 3 conductive layer 48 col. 10 lns 21-26; and shown as a known convention to directly contact at least one magnetic layer at Fig 20 layer 29, col. 2 lns 47,48; and **Fukuzawa et al**: as illustrated at Fig 5 with reflective conductive composition layer 101 in direct contact with magnetic free layer 110; Fig 6 with layer 121 in direct contact with magnetic free layer 129; Fig. 26 non-magnetic layers; or either of layers 3 or 4 in Figs. 32/33/34/39-42; or as layer 147 in Fig. 50-52; col. 2 lns 53-56; col. 3 lns 3-7, 21-26, 33, 34; col. 5 lns 7-10; col. 13 lns 45, 46; col. 22 lns 43-46; col. 23 lns 8,9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have ~~one of~~ the conductive nonmagnetic layer in *direct* contact with ^{one of} the magnetic layers in the spin valve, as shown by **Ikarashi et al** or by **Fukuzawa et al**, in the spin valve of the head in either **Swagten et al** or **Singleton et al** to more effectively generate the magnetoresistive effect required in the head spin valve. One skilled in the art would have been motivated to adopt the nonmagnetic layer in a spin valve as shown by **Ikarashi et al** or **Fukuzawa et al** with the expectation of increasing

the responsiveness of the head enhancing the magnetoresistive effect of the spin valve as seen in Ikarashi et al note the RH curve of Fig. 11 and see col. 3 ln 65 - col. 4 ln 4 or in Fukuzawa et al see col. 2 lns 55-58 and col. 6 lns 13-21; Table 2.

As to claim 4 thickness for the reflective, conductive layer see Ikarashi et al col. 8 lns 41, 42 Fukuzawa et al Fig. 3, col. 3 ln 44; col. 14 lns 63,64; col. 30 ln 9.

As to claim 3 materials for the reflective, conductive layer see Ikarashi et al col. 10 lns 43, 44; Fukuzawa et al layer 101; col. 29 ln 18

CONCLUSION

The claims are 1, 3-6 and 9-11

- No claim has been allowed.

INQUIRES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louis Falasco, PhD whose telephone number is (571)272-1507. The examiner can normally be reached on M-F 10:30 - 7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol D. Chaney, PhD can be reached at (571)272-1284. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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04/06


CAROL CHANEY
SUPERVISORY PATENT EXAMINER